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AMIGA WORKBENCH

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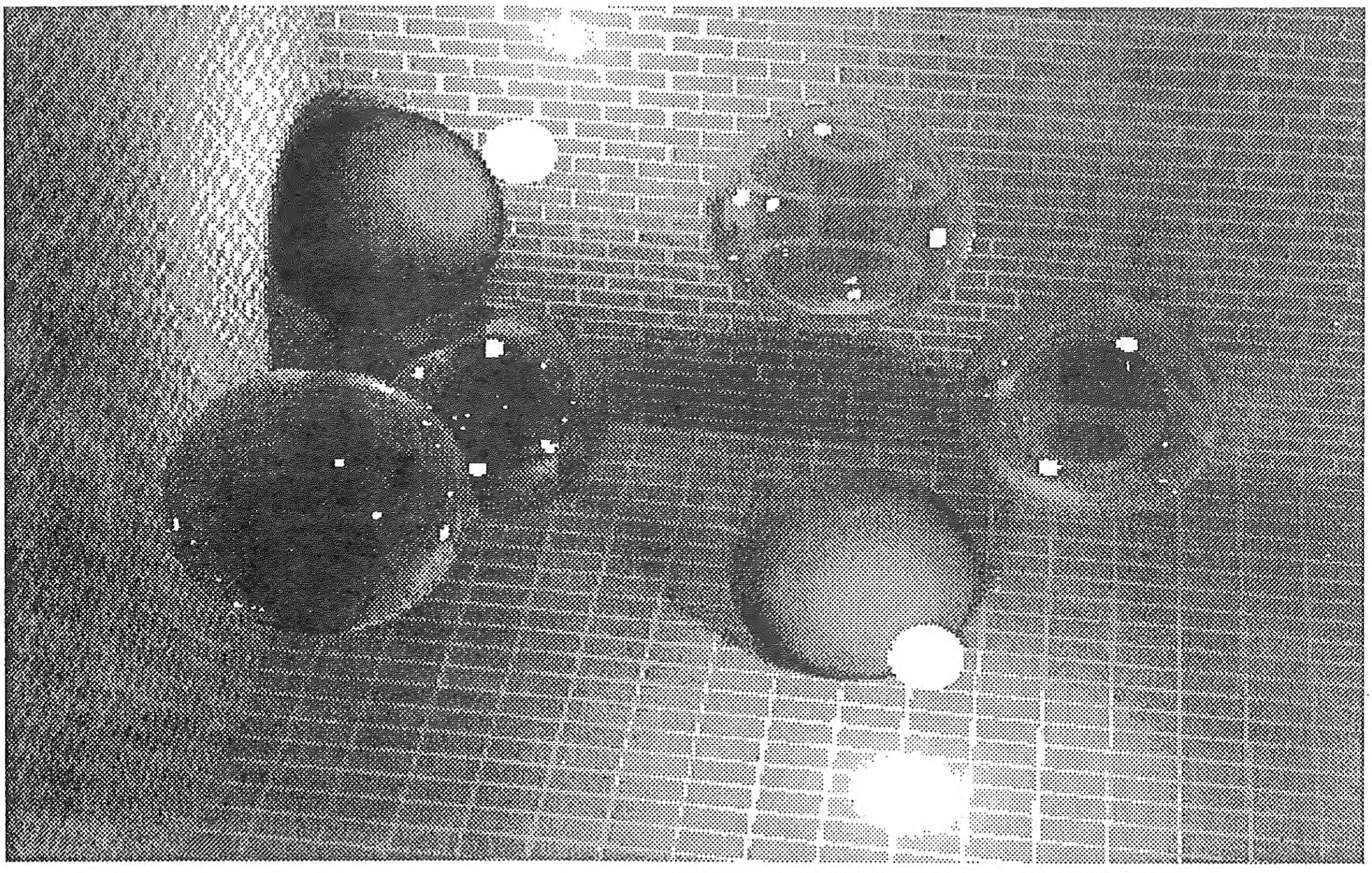

Picture: ray traced balls from DBWRender

Next AUG Meeting

Sunday, November 19th at 2pm

(Doors open at 1pm, meeting starts at 2pm sharp)

AUG meetings are held at Victoria College Burwood Campus
Burwood Highway, Burwood - Melways map 61 reference B5.

Amiga Users Group Inc, PO Box 48, Boronia 3155 Victoria, Australia

AMIGA Users Group

Who Are WE?

The Amiga Users Group is a not-for-profit association of people interested in the Amiga computer and related topics. With over 1000 members, we are the largest independent association of Amiga users in Australia.

Club Meetings

Club meetings are held at 2pm on the third Sunday of each month at Victoria College, Burwood Highway, Burwood. Details on how to get there are on the back cover of this newsletter. The dates of upcoming meetings are:

Sunday, November 19th at 2pm

Sunday, December 17th at 2pm

Sunday, January 21st at 2pm

Production Credits

This month's newsletter was edited by Con Kolivas. Equipment and software used was: Amiga 500 with SIN500-2 memory board, Professional Page, and HP Laserjet.

Copyright and Reprint Privileges

Contributions

Articles, papers, letters, drawings, cartoons and comments are actively sought for publication in Amiga Workbench. All contributions submitted for the purpose of publication that are printed in the newsletter are rewarded on the basis of one free public domain disk copy per column or half page printed with a minimum of one free copy. Contributions may be sent in on disk, paper or uploaded to Amiga Link or Amiga Link II in the area set aside for this purpose. Please send your contributions in text-only, non-formatted if they are on file and remember to include your address for return of disks and tokens for PD disks. Absolute deadline for articles is 23 days before the meeting date. Contributions can be sent to: **The Editor, AUG, PO box 48, Boronia, 3155.**

Membership and Subscriptions

Membership of the Amiga Users Group is available for an annual fee of $25. To become a member of AUG, fill in the membership form in this issue (or a photocopy of it), and send it with a cheque or money order for $25 to: **Amiga Users Group, PO Box 48, Boronia, 3155**

Public Domain Software

Disks from our public domain library are available on quality 3.5" disks for $8 each including postage on AUG supplied disks, or $2 each on your own disks. The group currently holds over 200 volumes, mostly sourced from the USA, with more on the way each month. Details of latest releases are printed in this newsletter, and a catalog disk is also available.

Member's Discounts

The Amiga Users Group negotiates discounts for its members on hardware, software and books.

Currently, Technical Books in Swanston Street in the city offers AUG members a 10% discount on computer related books, as does McGills in Elizabeth Street Just show your membership card. Although we have no formal arrangements with other companies yet, most seem willing to offer a discount to AUG members. It always pays to ask!

Back Issues of Workbench

All back issues of Amiga Workbench are now available, for $2 each including postage. Note that there may be delays while issues are reprinted. Back issues are also available at meetings.

Amiga Link I & II - Our Bulletin Board Systems

The Amiga Users Group operates two bulletin board systems devoted to the Amiga. using the Opus message and conferencing software. AmigaLink I and II are available 24 hours a day. AmigaLink I & II can be accessed at V21 (300bps) V22 (1200bps), V23 (1200/75bps) or V22bis (2400bps) using 8 data bits, 1 stop bit and no parity.

AmigaLink is part of a world-wide network of bulletin boards, and we participate in national and international Amiga conferences. AmigaLink has selected Public Domain software available for downloading, and encourages the uploading of useful public domain programs from its users. AmigaLink I (792-3918) is OzNet node number 8:830/324 and AmigaLink II (376-6385) is OzNet node number 1305/998

Newsletter Advertising

The Amiga Users Group accepts commercial advertising in Amiga Workbench subject to the availability of space at these rates:

Quarter page $20
Half page $40
Full page $70
Double page spread: $120

These rates are for full-size camera-ready copy or Professional Page format only We have no photographic or typesetting facilities. Absolute deadline for copy is 23 days before the meeting date. Send the copy and your cheque to: **The Editor, AUG, PO Box 48, Boronia, 3155, Victoria.**

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SPEECH, SOUND AND THE AMIGA.

No doubt, you have seen that the Amiga has quite incredible sound. However, if you have ever tried to program your own speech and sound, you will know how difficult it is! Even narrator.library is quite a tricky thing to get right without a manual by your side. Also, it is very difficult to make your own tunes. And if you are using your TV as a monitor, you may well have noticed that it has a very small tuning range over which you can get crisp sound. There is really no easy way to change this state of affairs unless you delve into your machine.

And that is a very rewarding experience! What is more, it is also quite easy.

Let us first consider how the Amiga talks to all the things it controls. The heart of the affair is the MC68000 (68000 for short!) Central Processing Unit. This has priority over all the other circuits (except under certain circumstances, the blitter and the Copper have priority over the 68000). This article assumes a knowledge of 68000 assembly language.

Now, if you enter the instruction "MOVE#$D680,$FF01", the CPU looks at the instruction sequentially. (note that on most assemblers, this is not a valid operation, it is an example only). First, the 68000 sees "MOVE", so it knows it will be transferring data. It then takes the value "D680", and unites it into memory location $FF01... but how does it do that??

Moving down yet another level, let us look at the 68000 closely. This integrated circuit has 24 pins, labelled A0-A23, which are called the "address buss". These pins carry a binary number which specifies which memory location is being looked at. There are 2^24=16 meg possibilities, hence the 68000 can talk to 16 megabytes of memory. To do this, it needs two other things, a data buss and a control buss. The data buss is a set of 16 pins which carry a binary word which is the data currently being transferred to or from memory or peripherals. The control buss takes up the remaining 28 pins on the 68000 (which has 68 pins in all). This buss contains all kinds of miscellaneous inputs and outputs which control input and output operations. For example, in the example "MOVE,#$D680,FF01", the 68000 control buss does thiws: * A signal called "WR" is driven to logic 0, to indicate that a WRite operation is being performed. * A signal called "M/IO" is driven to logic 1, to indicate that memory (not an I/O port" is being addressed. * A signal called "RD" is driven to logic 1, to indicate that a ReaD instruction is NOT being performed.

But there is no way that the 68000 can tell if it is writing to RAM or not. For example, if you tried to "MOVE.L #60102,$9FFFF0", you would be addressing a memory location which does not exist... but the 68000 doesn't know, and it dutifully tries to perform the operation, and then it goes on to the next one.

The consequence of this is that if we make a tricky bit of hardware, and set it up so that it can be addressed through a non-existent memory location, the 68000 will quite happily talk to it as if it were a RAM chip, and there is no need to tie up the parallel or RS232C ports.

Now, let us start with sound. The General Instrument Corporation of Japan manufacture an integrated circuit called the AY-3-8910A, which is a very versatile little brute. It features both 3 analogue input/output channels (but these are difficult to use in input mode), and two 8-bit input/output ports. Quoting from the manual, "The analogue sound output channels each provide 4 bits of logarithmic digital to analogue conversion, greatly enhancing the dynamic range of the sounds produced. All circuit control signals are digital in nature and can therefore be provided directly by a microprocessor/microcomputer. Therefore, one PSG can produce the full range of sounds with no change in external circuitry. Since the frequency range of the PSG ranges from the sub-audible at it's lowest frequency to post-audible at it's highest frequency, there are few sounds which are beyond reproduction". (Note: PSG stands for programmable sound generator). The PSG is very easy to interface; it simply consists of connecting the right pins to the right places. Like all the other projects I design for the Amiga, this is designed to be connected directly to the 68000 by means of a ribbon cable. As this is difficult to solder, I suggest you make a little expansion box... but more on that when we get to it!

Well, that's music taken care of... now what about speech? Well, General Instuments also manufacture (wait for it...) the HMMD6-LPR-SPO256A-ALT2/O6TR speech synthesizer. It is known almost universally as the SPO256A-AL2. This speech synthesizer (well... GI call it an "allophonic digital vocal chord and oral airflow control hardware simulation processor", but then they would) is rather more primitive than the speech program in narrator.library; it can only giv one sort of speech, but it scores over the library program in that it consumes very little memory. If you want to use narrator.library, you must first load the library itself, and then you need a fairly complex chunk of machine code which sets things up, defines a control block in memory, and contains the text to be output in ASCII With the SPO256AL2, all you need is a short routine which moves a block of RAM to the location where your chip is installed. In addition, the speech data is stored as a series of codes which represent sounds; this wastes a lot less space than ASCII text. For example, the word "MEDIAEVAL" takes up 9 bytes in ASCII; when encoded for the SPO256AL2, it looks like "MM ES DD EL EL VV AS LL" ans consumes 6 bytes (each two letter sound name takes up 6 bits).

Well, now you have a general overview of the system, which, incidentally, I call "SpeakMate" (because if you have it, it can "speak to" the Amiga's own speech synthesizer) or, in moments of passion, "PDRT-201". Next article, I will have you buying parts and actually building something! So until then its goodbye from...

RULER OF THE CATACOMB PEOPLE
(alias Lewin Edwards).

The LUCAS Project

L. McClure-Oct. 1989.

Despite the sound of the name this is not the latest highly imaginative adventure game, no it is far more serious stuff. If you own an Amiga 1000 and would like greater speed and processing power at a reasonable cost, read on, maybe this project is for you.

The LUCAS project is a do-it-yourself processor accelerator system which replaces the 68000 chip in your Amiga with a 68020 and 68881 combination. It also provides an expansion port for up to 4 MBytes of full 32 bit RAM memory. Details of the project were originally published in 'Transactor for the Amiga' December 1988. It is the creation of Brad Fowles, a hardware design engineer from Canada and his principle has been to share his design as Public Domain, distributing blank printed circuit boards with full documentation at minimum cost. It is not a project I would recommend to anyone without hardware experience unless they have a trusty friend prepared to help with construction and testing. To quote the project originator "If you don't have some experience with a soldering iron, please, don't let this be your debut." Since the LUCAS system was first made publicly available a number of problems have surfaced and various people have sent back to Brad information regarding their experiences and fixes they have used to overcome problems. He now includes these helpfull sugestions in each new release of his documentation. Do not let these comments discourage you - I have successfully built the first stage i.e. 68020 processor only. After some intial problems it is now rock solid in my machine, this article is being typed with a 68020 powered Amiga 1000 - can't you just feel the difference ?

LUCAS consists of a PCB designed to plug into the 68000 processor socket of your Amiga via an extended plug arrangement. It will work ONLY WITH AN AMIGA 1000 and is designed to fit around the daughter-board in the original Amiga 1000s. This should not stop it fitting into A1000s without daughter-boards i.e. full PAL versions however I have not verified this. My machine is the last model with the daughter-board and I had to offset the position of the LUCAS board relative to the 68000 socket in order for the board to fit around a case support post. It seems that the NTSC machines (for which this project was designed) shipped to continental U.S. have the CPU in a slightly different position on the main logic board.

In this article I will outline what LUCAS has to offer, what is involved in building it and my own experiences in getting it going. Hopefully in a month or two I will have the 32 bit memory set up and can find time to relate my experiences there too.

LUCAS offers the following features :-

- 68020 processor chip with provision for a 68881 numeric co-processor.

- The 68020/68881 run asynchronous to the Amiga bus - you buy the fastest parts you can afford and run them with an appropriate crystal on-board oscillator. I found a source of fair-priced 12 MHz 68020s so thats the speed mine currently runs at.

- The board is designed to run with 16 MHz parts but some people have had success operating at up to 20 MHz. Unfortunately my processor chip won't run at that speed (I did try).

- Bus access back into the Amiga is re-synchronised to the Amiga clock and therefore runs at the standard 7 MHz speed. This means that all standard Amiga peripherals should work with the LUCAS bus timing.

- Many software packages are now being supplied in two versions, one for 68000 and another for 68020/68881 e.g. Aegis Draw 2000. These programs will run significantly faster. Any software written to use the IEEE math libraries under WorkBench 1.3 will transparently use the 68881.

- There is a companion board (known as FRANCES) which provides up to 4 MBytes of 32 bit wide RAM. It uses 100nS 256K x 4 chips and can be populated in 1 MByte increments. This memory runs with 1 wait state at 16 MHz and utilities are provided to load EXEC up into this 32 bit wide memory for full speed operation. With this configuration the Amiga 1000 runs benchmark tests at 1.2 times the speed of an Amiga 2000 fitted with a A2620 equivelant board.

- The project is now quite mature, I purchased a set of boards in September and this was the seventh release of 100 boards.

- The LUCAS board as supplied can be modified without too much hacking to allow the original 68000 processor to remain physically on the Amiga bus along with the 68020. Only one processor can be used at any time - this is selected by a toggle switch before turning on the power. This feature is recommended if you have software (some games) that require a standard speed vanilla processor chip. I haven't made this mod. and as yet none of the software I use has failed, however the changes required are so straightforward I will definately do this in the future. Naturally the 32 bit memory will only work with the 68020.

- The system can be operated without the 68881 maths co-processor with a simple jumper strap. This is how I currently have mine. I also believe that if you prefer, and can afford, the improved performance 68882 can be used in place of the 68881 but I cannot verify this unless someone wishes to offer me one to try.

WHERE Do You GET It.

Brad Fowles,
RR #5,
Calendon East,
Ontario, Canada.
LON 1E0.

WHAT Do You GET and How Much Does It COST.

LUCAS - Bare PCB, Set of 4 PALS, Disk and documentation. = $75 US.

FRANCES - PCB, Set of 2 PALS, Disk and documentation. = $75 US.

I suggest purchasing the two board set (at about $200 Aust.) but build it one stage at a time - it is a complex project, the simpler you keep things the easier it will be to get working.

In addition to the parts supplied by Brad you will need the 68020 which currently sells locally (VSI) at about $300+ and a 68881 if you like, around $250 locally. I purchased a 12 MHz (considered obsolete) 68020 direct from JAMECO in the US. at around $90 US which finished up costing almost double that after conversion to Aust. dollars and paying the Post Office about $30 tax. The supplied documentation mentions a source of cheap second-hand chips from Kruger Technologies but address details are sketchy and I'm still chasing. Other parts that I had to chase a bit were the 68020 PGA socket - INTERCONNECTIONS Bayswater, the clock oscillator module - STEWARTS or ROCKBY ELECTRONICS Huntingdale, axial lead monolithic bypass capacitors - RADIO SPARES Tullamarine, pin strip for 68000 socket adapter - clearance bin at ELECTRONIC COMPONENT SHOP City. The memory controller chip DP8421AV-20 is available from NSD Box Hill for around $50. It would pay to phone some of these companies first to check their counter sales arrangments.

CONSTRUCTION and TESTING

The PCBs supplied are professional quality double-sided plated through holes with component silk screen and solder resist coating. They have VERY fine tracks and I strongly suggest a thorough examination of the boards with a magnifying glass (and back lighting) before any components are soldered in. My LUCAS board had no track faults or shorts but I had to be extremely careful with soldering in some areas because the solder resist was not perfectly aligned. I also took the time to inspect each solder joint closely, an effort I believe helped with my success and confidence to plug the board in and turn on the power.

This raises the question of testing the unit once it is built. The approach I took was very conservative and time consuming - but then again I didn't blow anything up either. If you build the standard LUCAS board but with a 64 pin socket on top to take your original 68000 chip, testing will be much easier. To first test my board I plugged it into the Amiga with the 68000 chip installed piggy-back BUT with no other chips on the LUCAS board. This enabled me to run my machine as a standard A1000 and to also verify a large part of my construction work - there was obviously no shorts on the address or data lines and my 68000/LUCAS board extender arrangement was doing its job.

The next step was the big one; remove the 68000, plug in the 68020 and the rest of the LUCAS chips + PALS and calmly check everything before reaching for the power switch.....

WINK-WINK-WINK, that flashing power LED tells you so much, what a relief, especially when it is followed by a familiar 'graunch' from the disk drive and appearance of the kickstart request on-screen. Just as a matter of interest the 68020 instruction cache is not enabled at this time so it is very inefficient. The little BEE-BOP tune at power-up must be software timed because it runs at about half speed compared with the normal 68000 system. At this point you are most of the way there, the next big hurdle is after kickstart has been read in and the operating system checks for a 68881 and enables the cache before requesting a WorkBench disk. If you have trouble at this point hunt out version 1.1 Kickstart and WB. and try again - they won't expect a co-processor or cache and will enable you to tell if the problem is chip or hardware related.

In order to simplify testing I originally disconnected all external peripherals and expansion bus boards (1Meg. memory + Hard Disk) and booted with a stripped down WorkBench floppy disk. My system would run from the first attempt but was unreliable once I plugged my expansion memory back on and would also lock up 2 times out of 3 at power-up. Fortunately both of these problems had been experienced by others and the documentation files gave suggestions of possible causes and fixes. The power-up problem was soon fixed with a couple of track cuts and some jumper wire but the regular failures with GURU 0000000B... indicated more serious data bus problems OPCODE 1111 (F-Line instructions). The documentation suggests a bus terminator may be necessary with some Amiga 1000s and details are provided for a terminator device to go at the end of the last expansion device. However my memory board doesn't pass through the bus so I finished up with a variation of my own installed conveniently on the 68000 adaptor plug. Since then ? NO further problems. Next I will build the 32 bit memory board then save up to buy a 68881/68882 and perhaps even a 20 MHz 68020.

If anyone has already built the LUCAS system and have it working I would like to hear from them. The hardware SIG was originally formed with the intent of being a LUCAS construction team but interest seemed to fade and the group has moved on to other areas of more general interest. If people are having trouble or would like to discuss my experiences further they can contact me at AUG meetings or on (03) 233 5664 A.H.

This space for rent (Preferably Articles!)

Goodies

Here's some stuff for the newsletter. The picture of Leo Schwab was digitised from the March/April 1988 issue of INFO (a glossy US commodore mag), and it is remotely possible that you or I could go to jail for using it without written permission from Info Publications, Inc (although i wouldn't sweat it). Well? do you feel lucky?

other stuff (reviews of Lester McClure's Audio Digitiser, NewTek's Digiview Gold, the Amiga Version of the MS-DOS strategy game Empire (not the Draco version available on Public Domain) and the Index to all the Workbench articles will arrive as soon as i've had a chance to sort it all out (i got my monitor back from Maxwell's about two hours ago, after a three week absence - Yow!)

bless you all, Saint Nikolai (7,1,odd) Kingsley

Strange Things You See When Cleaning Your Amiga

Well, if you own an Amiga 500, that is. On the main circuit board, just south of the internal drive, are the words:

B52 / ROCK LOBSTER
GRR / JSP / GUAY / FISH
RVW / VFA / DCA
HJM / CJW / TC / SMK
GET / LLK

C= A500 Rev 5

Who would have thought that Top Cat had a hand (paw) in designing the Amiga 500?

- St. Nikolai

A small bug in DeluxePaint II (PAL)

Okay. Take your average 640x400, 16-shade picture that was created in DeluxePaint II (NTSC), and try to load it into DeluxePaint II (PAL, i.e 640 x 512). If you've got enough chip memory to avoid getting the 'Not enough memory for requested # of colours' requester, you will most likely see another requester that says 'Can't load (whatever it was): Bad IFF form'.

After poking around the insides of the file in question with John Hodgson's NEWZAP facility, I discovered... not much. So I gritted (grat?) my teeth and went back to chopping up the 640x400 pictures, re-assembling them in a 640 x 512 format. AND THEN I discovered that...

The 'Bad IFF form' requester doesn't appear if you load the NTSC picture into PAL 640 x 256 mode (i.e. non-interlaced). Half the picture isn't visible, but then you can change the screen format to 640 x 512, and it by-passes the aforementioned bug (i suppose it's a bug... not even Electronic Arts would get away with calling this an 'enhancement').

Note: This only seems to happen when you try to use 16 colours. Eight or less, nychto problema, as Mikhail Gorbachev would say.

- St. Nikolai

(note: a more exciting title for this next part might be 'Psychotic Sex Murder Environment Variables')

ENVironment variables and what they can do for you

New to AmigaDOS 1.3 is the idea of Environment Variables and the ENV: device. Well, it's less of a device and more of a directory, but that's beside the point. There are two CLI commands that relate to this idea:

SETENV sets an environment variable to a particular value;

GETENV retrieves that value so you can use it (useless, otherwise!)

Some of you are probably muttering 'Big Deal!'. Well, it's true, this idea is a CLI sort of thing, and you can live without 'em, so if you'd rather be playing Xenon or Silkworm, then go right ahead.

A very simple application would be thus: you can never remember your tax file number, so you could type:

```
SETENV Tax_file_number "756 791 220"
```

(Note: the quotes are only necessary if the number has embedded blanks.)

Now, when Paul Keating's thugs kick your front door down, you can run to your Amiga, and type

```
GETENV Tax_file_number
```

and the value of that variable will be displayed on the next line.

BUT, that's not all!

In a script file, you can make decisions on the values contained in an environment variable. For example, my convoluted startup-sequence sets a variable called 'Rad_exists' equal to 'No'. If I should happen to mount the recoverable Ram Disk (RAD:), the last statement in the line sets that variable equal to 'Yes'. Previously, if you wanted to test for the existence of RAD:, you had to do something like:

```
assign >nil: RAD: exists
if warn
skip endpoint
endif
.
.
.
```

now, it's as simple as:

```
if NOT $Rad_exists EQ Yes    ; in the IF statement, you can call up
skip endpoint                ; ENVironment variables by putting a
endif                        ; $ in front of them.
```

'But that's only a saving of one line!' you exclaim. But if you're running this sort of thing on floppy disks, that one line is the one that slows you down the most, and even a one line saving is worth it. And it certainly is neater and quicker than creating a dummy file every time something exciting happens and then testing for its existence (or non-existence).

One more point to make: when you SETENV something, a file is created in the ENV: directory, which, if you don't assign it to something else, is RAM:. This file contains the text of the variable that you set, so if you do this:

```
SETENV Car_Keys "They're hanging up next to the fridge"
```

there will be a file created in the RAM: directory, called Car_Keys (and in that file will be the words "They're hanging up next to the fridge"). This means when you turn your machine off, the environment variables will go to never-never land. If you need them for long-term storage, then ASSIGN ENV: to something like df0:T.

- St. Nikolai

Baa Codes

Letter to the Editor:

Dear Mr Kolivas:

I was astounded yesterday when the June issue of WorkBench arrived, for you printed my letter about missing linefeeds entire. Meanwhile, I'd been at work to find a simpler solution than cranking up a disk editor to add a hex 0A to the end of every execute script. (Of course, there's an even more expensive solution: buy an editor or word-processor which always puts an $0A at EOF.) And -- I discovered some good things!

First, if you use Bill Hawes WShell instead of C-A's NEWSHELL, the problem disappears. Files execute completely despite a missing $0A at EOF!

Second, there's an absurdly simple fix: add a semicolon as the very last line, at the end of each script. This marks a comment, of course; if it fails to execute, who cares? But the previous line of code WILL have an $0A at the end of line, and will execute.

I'd hate to see anyone buy a new editor or word-processor (or work with a disk editor) when the solution is so bloody simple.

Cordially yours, Dick Barnes [of Amigan Apprentice & Journeyman]

M2SIG - The AUG Modula-2 SIG.

Coordinators' Comments by Karl Lean.

The October meeting of AUG saw the inaugural meeting of the Modula-2 SIG. I had been warned that many SIGs start off with a fairly good turn out, which gradually becomes a small, dedicated hard-core as months go by. Judging by the first meeting, this SIG will be different - we are already reduced to a small, dedicated hard-core !! The small turnout was not surprising, however, and in many ways it highlights one of the main reasons for the creation of the SIG - to promote and encourage the use of Modula-2 on the Amiga. As a programming language, Modula-2 is very much overlooked on the Amiga (especially in Australia), and hopefully we can provide people with help and information on how to get the most from their Amigas and Modula-2.

The M2SIG will be a pretty informal affair, if the first meeting is any indication. There is no 'committee', or formal structure - although I have landed the organisational role by virtue of the fact that at this stage there are only two of us (myself and John Hampson) with any long-term experience in Amiga Modula-2, and John already has commitments to the AUG as membership officer. As an "offical policy", the M2SIG openly invites anyone to get as involved as they wish - neither John or myself has any objections to other users seeking whatever level of involvement they wish.

M2SIG Aims :

Although nothing has been 'officially' laid out, there are a number of goals that John and I would like to see the M2SIG achieve.

(1). Pass on information regarding Modula-2 to anyone who would like to know more about the language, and what it offers in comparison to other Amiga languages like 'C' and 'Basic'.

(2). Provide a forum for users learning Modula-2 to learn and share the 'tricks of the trade' with others, and to find practical help when required.

(3). To act as a collection/distribution point for Modula-2 libraries, either in source or linkable format. Depending on the response, we would like to be able to place a disk into the Public domain containing sharable libraries and demo code.

(4). To add a "Modula-2" section to AmigaLink, to promote and exchange Modula-2 information with other groups.

Fish Disk #237

CLIPrintAn example of printing to the CLI from assembly code. Includes source (of course).

CType Another text file reader, but this one is small, reasonably fast, and includes bi-directional scrolling, search, go to a given percentage, and printing capabilities. Version 1.0, includes source in assembly.

DPlot A simple display program for experimental data, with the goals of supporting paging through lots of data and providing comfortable scaling and presentation. Version 1.0, source available from author.

ILBMLib A shared library (ilbm.library) to read/write IFF files, derived from the EA IFF code, along with various enhancements. Includes examples of using the library from C code, assembly code, or BASIC, along with source for examples and interface code.

ParOut Shows how to allocate and communicate directly with the parallel port hardware from an assembly language program. Includes source.

Speed A performance benchmark useful for comparing Amiga processing speeds. Performs 10000 iterations of some selected groups of 68000 instructions while using the DateStamp time function to record how many ticks it takes to complete. This timed duration is then compared against two known prestored times, one for a stock A2000 Amiga and one for an A2620 enhanced A2000. A relative comparison is calculated and displayed. Version 1.0, includes source in assembly language.

Fish Disk #238

CWDemo Demo version of a pop-up utility to control the color register assignments of Intuition custom screens. Version 3.1, binary only.

DMouse A versatile screen & mouse blanker, auto window activator, mouse accelerator, popcli, pop window to front, push window to back, etc, widget. Includes DLineArt, a screen blanker replacement program for use with DMouse. This is DMouse version 1.20, an update to version 1.10 on disk 168/169. Includes source.

LabelPrintA program that allows you to easily print labels for your disks. This is version 2.5, an update to version 1.9 from disk 210. Shareware, binary only (source available from author).

NGC Yet another virus check program. Checks the boctblock on all inserted floppy disks and reports nonstandard ones. Checks the jump tables of all resident libraries and devices and reports suspicious entries. Version 1, includes source in assembly.

Pyth A program to draw the Tree of Pythagoras. Version 1.1, includes source.

SteinschlagA tetris like game (Steinschlag means "Falling Rock") submitted by the author. This is version 1.8, an update to version 1.5 from disk 221. Binary only.

Fish Disk #239

Brunjes Various tools submitted together by the author. StringPkg is string package for both Forth style and NUL terminated strings. Date&Time are handy tools for getting and printing formatted date and time. Utils are utilities used by the other files. CursorControl is an example of moving the text
cursor. SpaceOrEscape is a handy word for pausing or stopping program output. Includes source code.

EvolutionThis program graphically simulates the evolution of a species of "bugs", the insect kind. Bugs, represented by moving blobs, eat bacteria represented by single pixels. They mutate, compete for food, reproduce and pass their mutations to their offspring. Fascinating example of graphics and software simulation. Standalone image and source code.

FFT Highly optimized Fast Fourier Transform tools for digital signal processing. The FFT can be used to compute the frequency spectrum of a complex signal. It is useful in a variety of different applications. Floating point and integer versions. Mixture of high level and assembly language code. Includes source (requires JForth).

Guru Handy "guru" number interpreter (well, handy after reboot anyway!). Tells you what "81000009" means, for example. CLI usage only. Standalone image with readme file. Source code included.

H2J Converts 'C' style '.h' include files to JForth style '.j' files. Useful when developing interfaces to new Amiga libraries like ARP, etc. Standalone image and source code.

HAMmmm2 Graphics hack that displays moving lines in a HAM screen for a hypnotic effect. Uses sound tools from HMSL if available, for a drone sound that corresponds to the graphics image. Standalone image and source code.

HeadCleanThis program, combined with a fibre cleaning disk, can be used to clean the heads on your disk drives. Source code examples of accessing the Trackdisk device, and using gadgets are included. Standalone image with source code. Shareware. Version 2.0.

JustBeepsSimple example of using Audio and Timer devices. Plays a series of beeps whose pitches are based on a just intoned tuning system. Standalone image with source code.

MandelbrotA fast Mandelbrot rendering program that uses some of the mathematical properties of the Mandelbrot set to greatly reduce the drawing time. Demonstrates graphics programming, assembly language, menus and IFF file I/O. Standalone image with source code.

NeuralNetExample of Neural Net programming converted to JForth. Demonstrates a programming technique that many say is the wave of the future for software. This is a simple demo that shows neural propagation. Standalone image with source code.

Textra This easy-to-use text editor allows multiple windows, and provides a simple mouse driven interface. Those familiar with the "Macintosh style" editors will be comfortable with Textra's Cut, Copy and Paste commands. Standalone image. Documentation included. No source code.

Fish Disk #240

CrossDOSA "tryware" version of a mountable MS-DOS file system for the Amiga. This is a software product that allows you to read and write MS-DOS/PC-DOS and Atari ST formatted disks (Version 2.0 or higher) directly from AmigaDOS. This tryware version is a "readonly" version, which does not allow any writes to the disk. A fully functional version is available for a very reasonable price from CONSULTRON. Version 3.02, binary only.

Dis An AmigaDOS shareable library which implements a symbolic single-instruction disassembler for the MC68000 family and a program which uses the library to disassemble/dump AmigaDOS object files, making full use of symbolic and relocation information. Includes source code in Draco.

DM-Maps IFF maps to the Dungeon Master game. All 14 levels are included.

MemLib A link library of routines to aid in debugging memory problems. Works with Lattice C 5.0 and possibly with earlier versions. It's features include trashing all allocated memory, trashing all freed memory, keeping track of freed memory with notification if it is written to, notification of memory freed twice or not at all, notification of overrunning or underrunning allocated memory, generation of low memory conditions for testing purposes, and identification of violations of memory use by filename and line number of the allocating routine. Includes source.

RunBack This is version 6, an update to the version on disk 152 (the version on disk 214 appears to be on a different evolutionary path). This version compiles under Lattice with many optimizations enabled, and can be made resident. Includes source.

XprLib External file transfer protocol library. Document and code example for implementing external file transfer protocols using Amiga shared libraries. This is an update to the version included with the vlt program on disk 226.

Fish Disk #241

ASDG-rrdExtremely useful shareware recoverable ram disk. This AmigaDOS device driver implements a completely DOS compatible disk device in memory that survives resets, guru's, and crashes. An absolute must for those with lots of ram. This is an update to the version released on disk 58. It now works with up to 8Mb of memory. It was rewritten in assembly and is now faster and much smaller. Binary only.

CBBS The W0RLI BBS system for use in amateur radio. Originally written for IBM-PC compatibles, it was ported to the Amiga by Pete Hardie. This is version 6.1c with source code.

Fix68010A program which patches executables that fail to run on machines equipped with an M68010, so that they no longer use the prohibited priviledged instructions. Binary only.

Man A program similar to the UNIX "man" program. Displays information about a topic from manual pages. Does not include any database of topics, you have to supply your own. Version 1.2, includes source.

NoClick A program which silences the clicking of empty drives on the B2000 under AmigaDOS 1.3. It should also work on an A500. This is version 3.4, an update to the version on disk 231. Includes assembly source code.

Tiles A basic tile game like Shanghai or GunShy. A board is covered with a set of 144 tiles, 36 different sets of 4 identical tiles, each with a picture on it. The object is to remove all the tiles, 2 at a time, by matching identical tiles. Version 2.1, includes source in Modula II.

Fish Disk #242

BootBlocksDetailed documentation on what a bootblock is and how it works, along with some sample bootblocks and a program to install a custom bootblock. Includes source for the sample bootblocks and the install program.

Check4MemAllows you to check for a specified amount of memory, with certain attributes, from a batch file. If the requirements are not met, a WARN returncode is generated. Version 2, includes source.

CustReq A glorified ASK command for your startup-sequence. It generates a requester with the specified title, text, positive and negative gadgets (either of which can be the default), and an optional timeout value. Version 2, includes source.

FileReq This is Jonathan's second version of a file requester, and is much more powerful than the one included on disk 204. Shareware, includes source.

FullViewA text viewer that uses gadgets at the bottom of the screen (thus can display text 80 columns wide), opens up to the full height of the workbench screen, has fast scrolling, and can work with compressed files (file compression program included). Shareware, binary only, source available from author.

Image-EdAn icon editor that allows you to draw and edit images up to 150 by 90, in up to 16 colors. Allows freehand drawing, empty or filled rectangles, ellipses, and triangles, lines curves, and polygons, copy, flip about x or y axis, stretching and condensing, flood fill and complement, text with selection and loading of font style, undo, magnified and normal sized images, and two active drawing screens at once. This is version 2.2, an update to version 1.9 on disk 211. Binary only, source available from author.

JAR A shareware game (Jump And Run) using 3-D

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2 serial port	$ 48
4 serial port	$ 79
Parallel port	$ 29
Floppy disk controller	$ 29
Personal telephone dialer/manager	$ 29
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16-bit hard drive controller, MFM/RLL	$95/$110
SCSI hard drive controller	$ 98
1200 baud modem (internal)	$ 50
2400 baud modem (internal)	$ 99
EPROM programmer	$125
Digital voltmeter	$150
Handscanner	$171
A/D / D/A converters	$199/$260
2400 baud FAX	$219
9600 baud FAX	$389
CD data cartridge/drive	$350
Data acquisition cards (various)	$375
8 meg RAM memory, expandable from CK	$199
40 meg tape backup	$299
20 meg hard drive, complete system	$229
40 meg hard drive, complete system	$359
80 meg hard drive, complete system	$575

Imagine the possibilities with access to hundreds of plug-in boards for your Amiga. For example, your AX-S chassis could have one 80 Meg 5.25" hard drive, two 40 Meg 3.5" hard drives, one 40 Meg tape backup, two 3.5" floppy drives, a FAX card, a modem, a multiple serial port and a scanner...all accessible from your Amiga.

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The AX-S Resource Library will be available on PD networks. Look for the Spirit "AXS Library" on Compuserve, People Link and Genie.

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A mid-priced, professional quality genlock and encoder with everything needed to produce simple or elaborate production or post-production.
Some features:
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INTERNAL 1.5MB RAM EXPANSION for A1000.
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PRICE: $395 for 0MB
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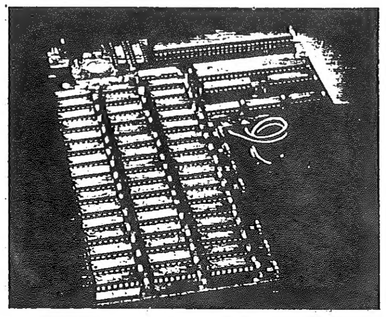

IN1000: 1.5 MB for AMIGA 1000 **PRICE:** $395 for 0MB
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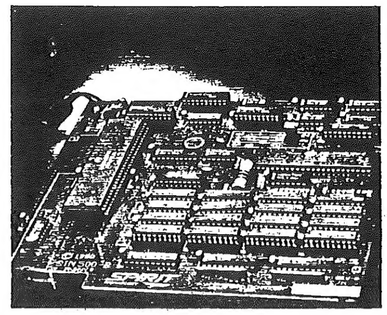
* Expandable from 0K to 0.5, 1.0 and 1.5MB $575 for 1MB
* Includes battery backed Clock/Calendar $665 for 1.5 MB
* Full memory Auto-config with RAM on/off
* Adds up to a full 1.5 MB memory to existing Amiga RAM.

SIN500: 2 MB for AMIGA 500 **PRICE:** $395 for 0MB
* Utilizes 1.0 Mbit (256 by 4) DRAMS. $485 for 512K
* Expandable from 0K to 0.5, 1.0 and 2M. $575 for 1MB
* Full memory auto-config with RAM on/off. $755 for 2MB
* Adds up to a full 2 MB memory to existing Amiga RAM.
* Optional external power supply. * Motorola 68000-10 included



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graphics. Your task is to collect the blue pills lying on the floors and steps, not to fall down or off the steps, and to avoid several monsters wandering about. You can collect various sorts of weapons to use against the monsters. Version 1.0, binary only, source available from author.

JPClock A short clock program that is just packed with features. This is version 1.2, an update to version on disk 204. Includes source.

PPrefs Preferable Preferences is a program designed to replace the standard preferences, that is shorter, more efficient, and easier to use. Binary only.

PaletteReqAn easy way to set the palette of any screen from your program. Includes source.

PopInfo A small utility which "pops open" to give you information about the status of your devices and memory. This is version 3.1, an update to version 3.0 on disk 223. Includes source.

ZeroVirusA fully integrated virus checker and killer, with bootblock save and restore features. Finds both bootblock and file based viruses. This is version 1.3, binary only.

Fish Disk #243

FragIt A dynamic memory thrasher for the Amiga. FragIt randomly allocates and deallocates psuedo-random size values of memory, ranging from 16 bytes to 50000 bytes by default. The result is an allocation nightmare, thousands of memory fragments are being created and destroyed continuously. This puts stress on the memory allocation routines of an application undergoing testing by simulating a very busy, highly fragmented memory environment. This is version 2.0, featuring many bug fixes, a full intuition interface, configuration settings via the icon, and more. Includes source.

ImageLabA program which performs image processing on IFF pictures. Includes standard image processing functions such as convolution, averaging, smoothing, enhancement, histograms, FFT's, etc. Also includes file conversion functions, a clipboard, and other useful functions. Version 2.2, binary only.

LPE LaTeX Picture Editor is a graphical editor for producing "pictures" for the LaTeX system, which may be imported by LaTeX. You can draw boxes, dashed boxes, lines, vectors, circles, boxes with centered text, and plain text. This is version 1.0, binary only.

NoClick A program which silences the clicking of empty drives on the B2000 under AmigaDOS 1.3. It should also work on an A500. This is version 3.5, a last minute update to version 3.4 on disk 241. Includes assembly source code.

PasswordA program which enhances your computers security by making it complicated enough that users without your password will get discouraged trying to boot and use your system. This should keep out most casual or nontechnical users. Version 1.21p, binary only.

Pcopy An intuition based disk copier similiar to the resident "DiskCopy". This is version 2.0, a highly upgraded rewrite of the version on disk 151. It features high speed diskcopy with write-verify and data recovery from damaged tracks. A lot of effort has gone into making this copier friendly in its usage, as well in its multitasking properties. Binary only.

SimGen This program will add a 2 or 4 color picture to your WorkBench screen. If the picture is digitized, it will look much like a genlock, hence the name SimGen (Simulated Genlock). Binary only.

SuperLinesA new lines demo with a realtime control panel that you can use to change various aspects of the action. Has 10 builtin color palettes, support for things like color "smudge", color cycling, color "bounce", multiple resolu- tions, and can display either lines or boxes. This is version 1.0, binary only.

WarpUtilWarp (version 1.11), UnWarp (version 1.0), and WarpSplit (version 1.1). Warp reads raw filesystems and archives them into a compressed version in a normal file. UnWarp turns them back into filesystems. WarpSplit splits them up into smaller pieces on a track by track basis. Binary only.

Fish Disk #244

BBChampionThis is BootBlockChampionIII, a very nicely done program that allows you to load, save, and analyze any bootblock. This is version 3.1, binary only.

BootIntroThis program creates a small intro on the bootblock of any disk, which will appear after you insert the disk for booting. The headline can be up to 44 characters. The scrolling text portion can be up to 300 characters. This is version 1.2, an update to version 1.0 on disk 188. Binary only.

FMC An alternative to the NoFastMem program. Uses a cute little switch gadget to turn fast memory on or off. Version 1.2, includes source in assembly code.

SizeCheckerSize checker uses a list of possible sizes of a file to check for unexpected changes in the size of those files. For example, it can be used to spot a link virus or to point out changes in the configuration of your system. With the appropriate comments added to your size list, you can check to see what version of the files you are using (1.2, 1.3, 1.4, ARP, etc). Version 1.0, binary only.

TextDisplayA text display program, like "more" or "less", but about half the size and handles all screen formats (pal/ntsc, interlace/non-interlace, etc). This is version 1.52, an update to version 1.1 on disk 188. Binary only.

tColor A program designed to change the colors of any screen. You can also add and subtract bitplanes in the screen, or convert the screen to black and white (grayscale). Handles HAM and EHB screens. Version 1.2, includes source in assembly code.

AUGADS

All ads placed here are published for one month only unless re-submitted. Ads can only be advertised from current members, but anyone can buy something from here (obviously)

For Sale: A2000 with 1081 monitor, 2090A autoboot hard disk controller, 20 meg hard card, 2000 fitted with 1.3 Roms. $3000. Karl Lean - 509 8861

Some Better News on the Music Front.

We have waited a long time for anything which looked like a professional music printing programme for the Amiga. Accompanying this article are some examples of music printed on an Epson LQ 500 24 pin dot matrix printer. The printing programme is Dr.T's The Copyist Professional. (This programme is available at three different levels to suit your pocket. This is the expensive one!) The Dr.T Music Software is now available in Australia and has been configured for IBM, Atari and Amiga computers. The Copyist is designed to work with the Dr T KCS (Keyboard Controlled Synthesizer) Programme. This is quite a good and powerful sequencer but does not show your music in notated form. The Copyist can overcome this problem. If you load your completed sequencer files into the Copyist it converts them into musical score and will then print them. According to the accompanying booklet the Copyist can produce scores from sequence files in a number of MIDI sequencers. The programme allows for the import of KCS files, MIDI files and SMUS files. It should therefore work with Soundscape but I have not had time to try this yet.

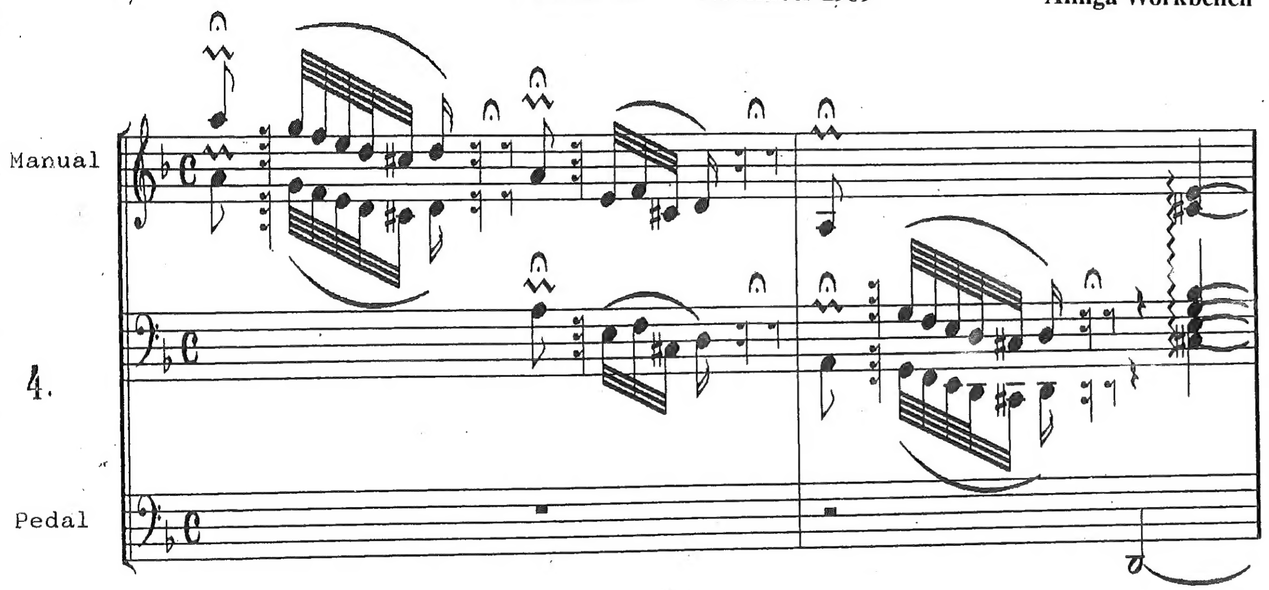
The Copyist allows for editing at a fairly sophisticated level and allows for the extraction of parts from a score and transposition of scores.

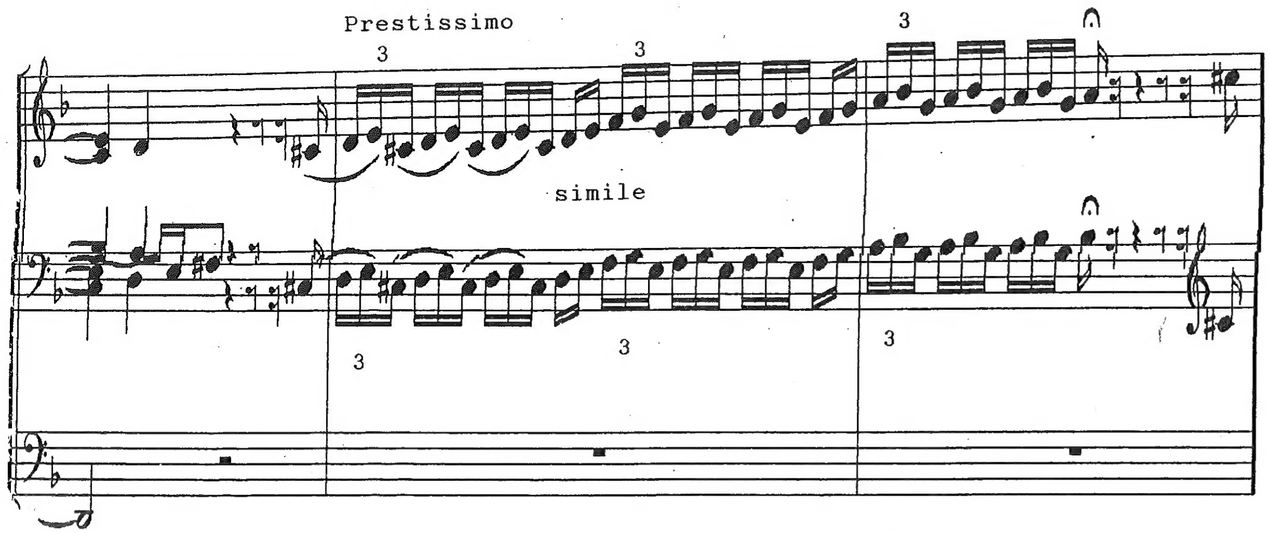
The Copyist requires an Amiga with at least one meg of RAM and will print scores on any printing device supported by the Amiga.

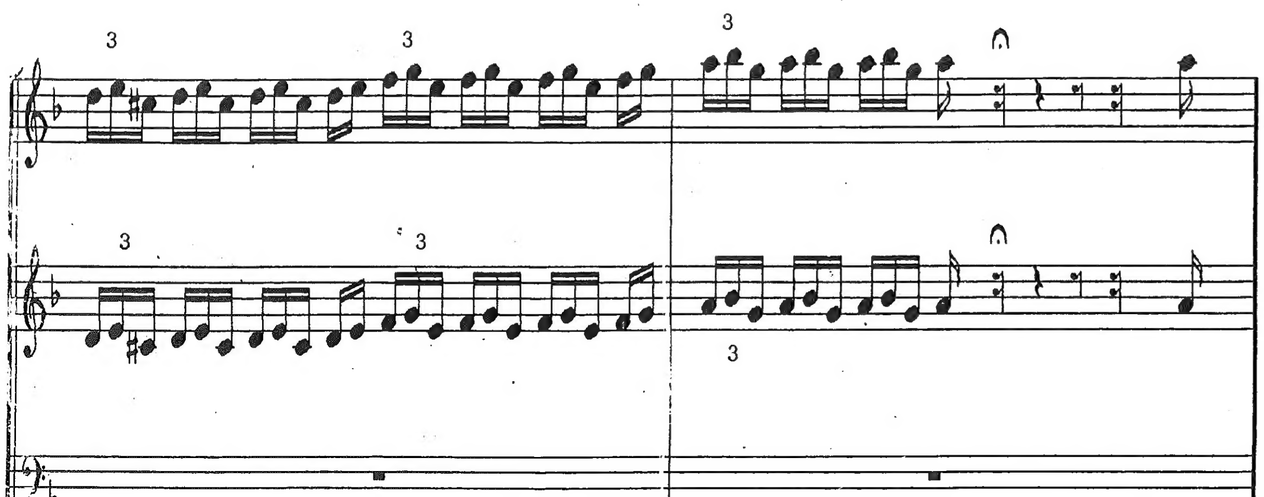
Another imminent release, should be within the next month in Australia, is Passport's Master Tracks Pro. This is a friendly sequencing programme which works very well on a 512 Mac and so I imagine it should on an Amiga 512. One of the advantages of the Amiga getting these programmes after other computers is that many of the earlier bugs have been overcome and the programme is better on the Amiga. A good example of this is Deluxe Music Construction Set which is nothing like the Amiga programme when run on a Mac. It seems that as Amiga begins to take on in the market we can expect a few more goodies to pop up in the music world. We'll try to keep you posted through SMAUG. Which reminds me. Niel Rutledge, our Smaug Co-ordinator has just compiled SMAUG #1, the first public domain music disk to come out of our group. Its full of lovely goodies so order your copy now.

Doug Myers.

```
'Binary File Editor   Version 2.0
'by Mark Kelly        Swan Hill

'REQUIRES:  AmigaDOS TYPE command
'         :  Dos.bmap in LIBS: or current dir
' BFE lets you view & edit ANY file
(text,.info,executable etc).
' It shows both hex and ascii dumps of the target
file.
' You can edit by entering either hex or ascii
values.
' e.g. read c/ED into BFE.  Use SEARCH (S) to find
"raw:"
'    & then change Ed's default window size/position!
' Use BFE to modify other troublesome text or data
hardwired
'  in any compiled program.
' NOTES: SEARCH won't find text broken across line
boundaries.
'        BFE can't add/delete bytes, only CHANGE
them.

CLEAR ,100000&     'adjust this to fit your memory
DEFINT a-z
ON BREAK GOSUB SaveExit:BREAK ON  'force a safe exit!
DECLARE FUNCTION Execute& LIBRARY
DECLARE FUNCTION xOpen& LIBRARY
LIBRARY "dos.library"          'for TYPE command
Top=1                          'line # at top of screen
byte=1 : Lin=1                 'current BYTE in screen
line LIN
nShow=22                       '# lines to show
Scrl=nShow*8-1                 '# pixels to scroll
UARR$=CHR$(28): DARR$=CHR$(29): ESC$=CHR$(27)
LARR$=CHR$(31): RARR$=CHR$(30): help$=CHR$(139)
GOSUB help
GOSUB ReadFile
IF nLine<nShow THEN nShow=nLine  'not full scrnful
i=1: GOSUB ScrnFul
GOSUB PutCursor
GOSUB HiLite

WHILE 1
aa$=UCASE$(INPUT$(1))
prompt ""
GOSUB unhilite
IF aa$=RARR$ THEN        'right
IF byte<16 THEN byte=byte+1
ELSEIF aa$=LARR$ THEN        'left
IF byte>1 THEN byte=byte-1
ELSEIF aa$=DARR$ THEN        'down
IF Lin+Top<=nLine THEN
Lin=Lin+1
IF Lin>nShow THEN
Lin=nShow
SCROLL (0,0)-(600,Scrl),0,-8
Top=Top+1
LOCATE nShow,1:PRINT x$(Top+nShow-1)
END IF
END IF
ELSEIF aa$=UARR$ THEN          'up
IF Lin=1 AND Top>1 THEN
SCROLL (0,0)-(600,Scrl),0,8
Top=Top-1
LOCATE 1,1:PRINT x$(Top)
ELSE
IF Lin>1 THEN Lin=Lin-1
END IF
ELSEIF aa$="A" THEN       'edit with ASCII char
prompt "ASCII CHARACTER: "
k$=INPUT$(1): a=ASC(k$)
GOSUB NewByte
IF byte<16 THEN
GOSUB unhilite: byte=byte+1 'auto advance
END IF
ELSEIF aa$="H" THEN       'edit with HEX val
```








```
prompt "HEX BYTE (2 digits): "
h$=INPUT$(2): a=VAL("&H"+h$)
GOSUB NewByte
IF byte<16 THEN
GOSUB unhilite:byte=byte+1 'auto advance
END IF
ELSEIF aa$=help$ THEN
GOSUB help
ELSEIF aa$="T" THEN   'goto top of file
byte=1: i=1: GOSUB ScrnFul
ELSEIF aa$="B" THEN   'goto end of file
i=nLine-nShow+1: GOSUB ScrnFul
Lin=CSRLIN-1: byte=1
ELSEIF aa$="D" THEN   'down 1 screen
i=Top+nShow:IF i>nLine THEN i=nLine-nShow+1
GOSUB ScrnFul
ELSEIF aa$="U" THEN   'up 1 screen
i=Top-nShow:IF i<1 THEN i=1
GOSUB ScrnFul
ELSEIF aa$="S" THEN   'search
GOSUB Search
ELSEIF aa$=ESC$ THEN  'save/quit
GOSUB SaveExit
ELSE
prompt "Press HELP for help!"
END IF
GOSUB PutCursor
WEND
GOSUB SaveExit
END

PutCursor:
nArray=Top+Lin-1                        'current array
line
HexCol=7+((byte-1)*2)+INT(byte/4.2)     'column of hex
byte
AscCol=45+byte                          'col of ASCII
byte
h$=MID$(x$(nArray),HexCol,2)            'copy current
hex
a$=MID$(x$(nArray),AscCol,1)            'copy current
ascii
GOSUB HiLite
RETURN

HiLite:   COLOR 0,3: GOTO h   'hilight current byte
unhilite: COLOR 1,0           'unhilight entry point
h:        LOCATE Lin,HexCol: PRINT h$;TAB(AscCol)a$;
LOCATE 1,90
RETURN

ScrnFul:      'print screenful from line i
CLS: Top=i :Lin=1
WHILE i<=nLine AND CSRLIN<=nShow
PRINT x$(i): i=i+1
WEND
RETURN

NewByte:        'replace byte BYTE in line LIN
h$=RIGHT$("0"+HEX$(a),2)              '2-digit hex
IF a>=32 THEN a$=CHR$(a) ELSE a$="."
MID$(x$(nArray),HexCol,2)=h$      'replace old hex
MID$(x$(nArray),AscCol,1)=a$      'replace old ascii
GOSUB HiLite
RETURN

Search:
nFind=0: Found=0: i=Top+Lin-1  'start at current line
prompt "SEARCH FOR: "
INPUT;"",s$
WHILE Found=0 AND i<nLine
Found=INSTR(46,UCASE$(x$(i)),UCASE$(s$))
IF Found THEN
nFind=1 : byte=Found-45   'flag >=1 find : Byte #
IF i<Top+nShow THEN       'if Byte is onscreen...
Lin=i-Top+1             '... just hilight it
ELSE                      'else rewrite screen
GOSUB ScrnFul
END IF
ELSE
i=i+1   'keep looking
END IF
WEND
IF nFind=0 THEN prompt s$+" not found"
RETURN

ReadFile:
INPUT "Filename to load";file$
PRINT "Typing...";
com$="TYPE >ram:temp "+file$+" opt h"
com$=com$+CHR$(0) : nil$="NIL:"+CHR$(0)
nhandle&=xOpen&(SADD(nil$),1006)
success&=Execute&(SADD(com$),0,nhandle&)
OPEN "ram:temp" FOR INPUT AS 2
nLine=LOF(2)/62
DIM x$(nLine)
PRINT "Storing"nLine"lines..,";
FOR i=1 TO nLine: LINE INPUT #2,x$(i): NEXT: CLOSE
KILL "ram:temp"
RETURN

help:
WINDOW 3,"   KELLY'S FILE
EDITOR",(100,50)-(550,130),8
COLOR 2,3: CLS: PRINT
PRINT " A   Edit with ASCII char |  H    Edit with
HEX value"
PRINT " S   Search for text      |"
PRINT " ESC Save/quit            |  HELP Show this
stuff"
PRINT " T   Goto top of file     |  U    Up 1 screen"
PRINT " B   Goto bottom of file  |  D    Down 1
screen"
PRINT :PRINT ,"-- Hit Any Key --";: a$=INPUT$(1)
COLOR 1,0: WINDOW CLOSE 3
RETURN

SaveExit:
COLOR 1,0
prompt "Enter FILENAME (Q=resume editing,
RETURN=exit)"
INPUT;": ",aa$
IF UCASE$(aa$)="Q" THEN RETURN
IF aa$<>"" THEN
OPEN aa$ FOR OUTPUT AS 2
a=-1:prompt "Writing "
FOR i=1 TO nLine
pc=INT(i/nLine*100)+.5
IF pc>a THEN LOCATE nShow+1,8:PRINT pc"%";
FOR b=1 TO 16
a$=MID$(x$(i),7+((b-1)*2)+INT(b/4.2),2)     'pull it
out
IF a$<>"  " THEN PRINT #2,CHR$(VAL("&H"+a$));  'write
it
NEXT
a=pc
NEXT
KILL aa$+".info"      'created by BASIC
END IF
CLS: CLOSE: LIBRARY CLOSE
END

SUB prompt(text$) STATIC
SHARED nShow
LINE (1,nShow*8)-STEP(576,8),0,bf  'zap old prompt
COLOR 3: LOCATE nShow+1,1: PRINT text$;: COLOR 1
END SUB
```

Don't believe what they tell you.

I found out early that too many people don't know very much about the goods they sell. It was when I wanted a printer for my A500, and I called in to a local computer dealer (in St Kilda, they aren't there any more) to check out what they had. My eye was caught by an Epson GX 80, so I asked the salesman if it was a standard centronics/parallel interface. All he could tell me was that it was an "IBM compatible" parallel interface, which didn't answer my question, so I explained that it was for an Amiga, which is not an "IBM compatible" computer.

The salesman then decided that it wouldn't work with an Amiga and told me so, but I liked the price so I asked if I could bring in my computer and try it with the printer. The way I put it was, if it works, I'll buy it, and on that basis he was willing to let me try. He had nothing to lose.

The poor bloke was a little disturbed when I walked in with this thing under my arm, plugged it in and ran a few demos which left his AT clones on display looking a bit pale, but with no trouble at all we got the GX-80 with the parallel interface cartridge connected and running. I did a graphics screen dump (using the pd Epson printer driver that was going around for Workbench 1.2) the salesman went a little greener, (I'd told him how many hundred - not thousand - dollars I'd had to pay for my little wonder), and I said it seemed alright to me, and bought it.

Since then, if I hear about something I'd like, I check it out, ask to try it, and forget what people tell me about compatibility.

The latest was the most annoying.

I run my pc through an A520 modulator which came with the package, through my vcr into the T.V. and hi-fi. I don't have a colour monitor, and don't really want one. (I should say, I don't think the cost of one is worth what I would gain from it.) But I have thought for a few months it would be nice to have a cheap mono monitor so I could take the Amiga to work when I wanted, and to be able to use the vcr/hi-fi for other things and have a monitor I could use when I don't really need the colour graphics.

So I started shopping around, making 'phone calls and looking in computer stores. But every time I asked the people who should know, ie Amiga dealers, if there was a decent mono monitor available, I was told the same thing;I would have to buy $1000 monitor to run off the Amiga because of the high resolution graphics mode display it used, even for mono, because even if I got a monitor to work with a workbench display it wouldn't have the bandwidth for hi res or interlace. Most places just said I should buy a 1084s and be done with it. I have to admit that the 1084s seems like good value at the price, and a pretty good monitor, but like I said before, for the use I wanted it for I couldn't justify the cost.

And I was getting pretty cheesed off seeing ads for computer dealers selling monitors for IBM/Clown machines for $99. So I decided to see for myself just how "incompatible" these monitors really were.

I did know one thing - the Amiga does not have an IBM type nine pin video socket, but it does have a built in monochrome composite video output, and if I could get a monitor to hang off this I might have something worth trying. Even though I'd been told (by the dealer who sold me the Amiga) that I'd really need at least a Multisynch monitor to see anything, if I didn't want to buy the Commodore 1084s, I thought it worth a try.

With the Amiga on the back seat, I drove off to the Computer Trader, in Hoddle St in Abbotsford, who had advertised a clearance sale of monitors, graphics cards, (yes, another IBM/Clown dealer) and graphics accessories from $50.00. Looking through the stock, I could see most of the monitors available had ttl (nine pin) connections, but I did see two with composite inputs.

So I asked the salesman if I could bring in my computer and try it. Again, he had heard of the Amiga and knew it wasn't compatible, but when I used my old line, "If it works, I'll buy it," he decided he had nothing to lose, so I plugged in the Amiga, connected the monitor to the mono output, and booted workbench no problems. Actually, it looked pretty sharp, but I let that go as an optical effect as the screen was only about a third of the area of the tv screen I usually work on.

Remembering the dire warning I'd had about these things not being compatible with the high quality graphics modes, I changed preferences for interlace and rebooted. It still looked great. So I displayed a couple of hi res and HAM images, and apart from some fine black lines when I look close at the screen, and the fact that it was green, there was no problem. No evidence of any sort of bandwidth or synch problems, none of the tearing of the picture or garbage on the screen that I'd been promised by the Amiga dealers, and only a barely noticable loss of resolution, if I looked closely.

So I bought it. For $75.00. Its a Samsung model SM-12SS31A6 12" Monochrome Display Monitor, and I am very happy with it. And I'm not very happy with those dealers who had told me flat out that it just wouldn't work and would have had me pay at least 10 times that much. I'm sure the more expensive monitors would be better quality, but this one does just what I wanted it for, and is small enough not to be too inconvenient.

(By the way, the $50.00 monitors also had composite video input, (and sound) but I didn't even try them because they appeared to be second hand. And the more expensive ones were all ttl level interfaces, not composite video, which might have caused a problem with the interface, would have given me a more limited grey scale, and was certainly more inconvenience than I was willing to bother with.)

And as an unexpected benefit, interlace jitter is LESS annoying on the new monitor than on my tv screen. I have to admit though that the Channel nine movie doesn't look as good in green; I plugged the monitor into the video output of the vcr, just to see if it would work, and it did, and I got a good, but green, mono picture.

So remember, its only incompatible if its been tried and proven

not to work.

And if you bought an Amiga 500 package which didn't include a monitor, rest assured that you DON'T have to pay an outrageous price for a simple monitor which will still be 100% improvement over working on a television. And I mean working; I'm still going to be playing games and drawing pictures on the larger, colour screen of my tv, and listening to the fantastic sounds on the hi-fi through the vcr.

LOST (wb1.3 script)

by Alan Watson

This is a simple script that may prove useful to those people who misplace important files. (like me!)

What to do:-

Open a cli window. Use ED to make a file called,

lost!

Enter the following script as shown. Save the file. And then use the PROTECT command to set the script bit for the file.

Or,

just type what follows after opening a cli window.

run ed lost!

This starts the full screen editor. Now the script information, type this into the ED window.

```
.key filename,drive
.def drive "df0:"

echo "level 1"
dir <drive>#?<filename>#?
echo "level 2"
dir <drive>#?/#?<filename>#?
echo "level 3 "
dir <drive>#?/#?/#?<filename>#?
echo "level 4 "
dir <drive>#?/#?/#?/#?<filename>#?
```

Use the "Esc" key followed by an "x" to save the file and quit back to the cli. Use the cli command "protect" as follows.

protect lost! werds

And there it is. A useful file locating command. To get feel for what this script does follow these examples,

lost! topaz df0:

lost! top df0:

lost! usa df0:

Why I Bought an Amiga

by Bob Hurley

Why did I buy an Amiga? We'll start from the beginning. From the earliest times I was fascinated by science. Chemistry with it's smells and explosions was OK, but Physics, WOW! How things worked, that was it, machines, bikes, cars, planes, movies, sound, pianos, music, waves in the sea, mathematics, electronics and eventually computers.

Not that I got into computers early - I sat on the fence. Everybody said they would get better, smaller, cheaper and they did. I let a few heads roll while I waited, and waited...

My son grew up (he's 48 now) and he bought a C64 about 5 years ago. I've got to admit that upstaged me; the closest I'd got was a fancy calculator to add up how much I'd saved by waiting. He showed me some games on it and a couple of programs he'd written, one of which was quite clearly based on an idea I first outlined to him about 30 years ago. The games didn't grab me but the programs weren't bad.

I bought a C64. Three years ago. That was alright, but I couldn't help noticing some elegant ads for the Macintosh. All sorts of things done with a mouse! So simple, pretty clever, I thought, but I decided I would resist, put it off, don't rush, let a few more heads roll!

Flashback: I forgot to mention it before, but earlier in life I had to earn a living. One of my solutions to that involved me having my own printing business. Originally we set layouts with cold metal handset type, graduated to hot metal (linotype etc), then we went into offset which involved a (changeable fonts) glorified typewriter for 12 point or less, and a series of photographic type headlining machines over the years for larger sizes. Then out came dedicated photographic typesetting computers which handled all typesizes and styles and for the very first time made photographic justifying easy. They were about $20,000 when money was money, so we resisted, but the people who eventually bought my company from me had to buy one because competition made it inevitable.

One of my good friends had neeb out of touch for some years. He invited me out to his place. He's into music and art (and computers - and he's in AUG).

He showed me the Amiga. I'd seen Amigas in the shops and what hit me was the impact and clarity of the colours. I had only noticed games which reminded me of arcades, yuk! You may have gathered that I think about things a bit before I buy. But now I had a mouse in my very own hands. No pressure. He had a graphic program which seemed to do everything the dedicated typesetting machines did, and more, from one 3 1/2" disk. He had music programs which were something else again. And much more. I don't think I needed a lot of convincing; I was well into MIDI music already and could see the possibilities...

The next month I joined AUG (first priority).
-The month after that I got my Amiga, MIDI adapter and 5 1/4" drive.
--The next month a colour printer and a 1084S, easier on the

AMIGA HELP-NETWORK

The following is a list of AUG members who have volunteered to share their knowledge/experiences with others. If you also want to help and have your name listed here please contact Lester McClure (233 5664 AH). The names are not listed in any order of priority and the format may change in future listings. Please keep contacts to reasonable hours (6 to 9 pm unless otherwise mentioned) and remember one very important basis of this service - they are volunteers...

Neville Sleep	-	AmigaBasic (beginner level)	- 546 0633
Rudy Kohut	-	AmigaBasic (intermediate)	- 807 3911
John Elston	-	AmigaBasic (advanced)	- 375 4142
Alan Garner	-	AmigaBasic, A/C Basic	- 879 2683
Mal Woods	-	C(Introductory), Professional Page	- 888 8129
Andrew Gelme	-	C (advanced) - AZTEC	- 645 1744
Eric Salter	-	C (advanced) - LATTICE, TeX	- 861 9117
Norm Christian	-	Amiga Art, Music	- 580 3756
Neil Rutledge	-	Music, Audio Sampling, MIDI	- 597 0928
Russ Lorback	-	Excellence!, Superbase Professional (Beg-Int) After 9:30 pm	- 756 6640
Darren King	-	Amiga Viruses, Modems/communications	- 546 5040
George Wahr	-	Side-Car, Bridgeboard	- 376 6180
James Gardiner	-	AmigaDOS, Auto-boot hard drives	- 523 6843
Stephen Bell	-	Hardware design	- 25 8415
Joe Santamaria	-	Graphic arts - DPaint, Sculpt etc.	- 836 9129
John Hampson	-	Modula-2	- 584 3921

---

eyes than the portable CTV.
---In one huge step I had finally caught up with the world.

THAT'S WHY I BOUGHT AN AMIGA. All paths led to it, it was inevitable. I was FATED to have one, just as I was fated to be born this century and to marry my lovely wife.

Incidentally, I think my son has been more than somewhat upsatged this time round. Not to mention my grandsons. You see, they don't move very fast.

They don't seem to realise that if you stand still you are actually moving backwards; the world will go on and leave you behind...

NWAUG

North West Amiga Users Group

Meetings held every 2nd Wednesday
at 7:30 pm in Rooms 19 & 20, 1sy Floor
Essendon Community Centre,
Cnr Mt Alexander & Pascoe Vale Rds
Moonee Ponds 3039

Meetings Scheduled:
15/11/89 29/11/89 13/12/89

NWAUG

Editor's Column

(Written 24-Oct-89)

Aargh. That's the simple way I can put it. Last month we had a printing error which *hopefully* has been rectified this issue. As for articles, I have never seen them run so close to nothing so quickly. This month I was low on articles, had disk/file failures, new crashes from Professional Page, other numerous problems, and to top it all off, right smack in the middle of my study vacation. Next month (which will be smack in the middle of my exams) if I don't get any articles we will end up with a small newsletter. I know it sounds like I am whinging, but normally I would love writing some (perhaps even all) of the articles in this newsletter, but I am sorry, I just cannot devote time from what I perceive to be the important part of my life.

Oh yes and thanks enormously to those who did contribute this month. You shall all be justly rewarded, and most of the names you see within this month's newsletters you will find printed in at least one other newsletter. These people deserve special mention.

Oh yes, don't think I am giving you all up - on the contrary, I still have time to devote to the AUG, as you will almost be guaranteed of my turning up to the main meeting, and there will ***always*** be a newsletter each month as long as there is an AUG.

As always, regards,
Con Man 1.4.
(And see you at the next main meeting.)

This month, Commodore & Hi-Tech reps will be at the meeting.

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Application for Membership of The Amiga Users Group Inc

Membership is $25 per year. Send your cheque to: Amiga Users Group Inc, PO Box 48, Boronia, 3155

Details on this side are optional

Surname: _____

First Name: _____ Year of birth: _____ Which model Amiga: _____

Address: _____ Occupation: _____

_____ Postcode: _____ Interests: _____

Phone Number: _____ STD Code: _____

Where did you hear about AUG: _____

_____ Dealer's Name: _____

_____ Dealer's Address: _____

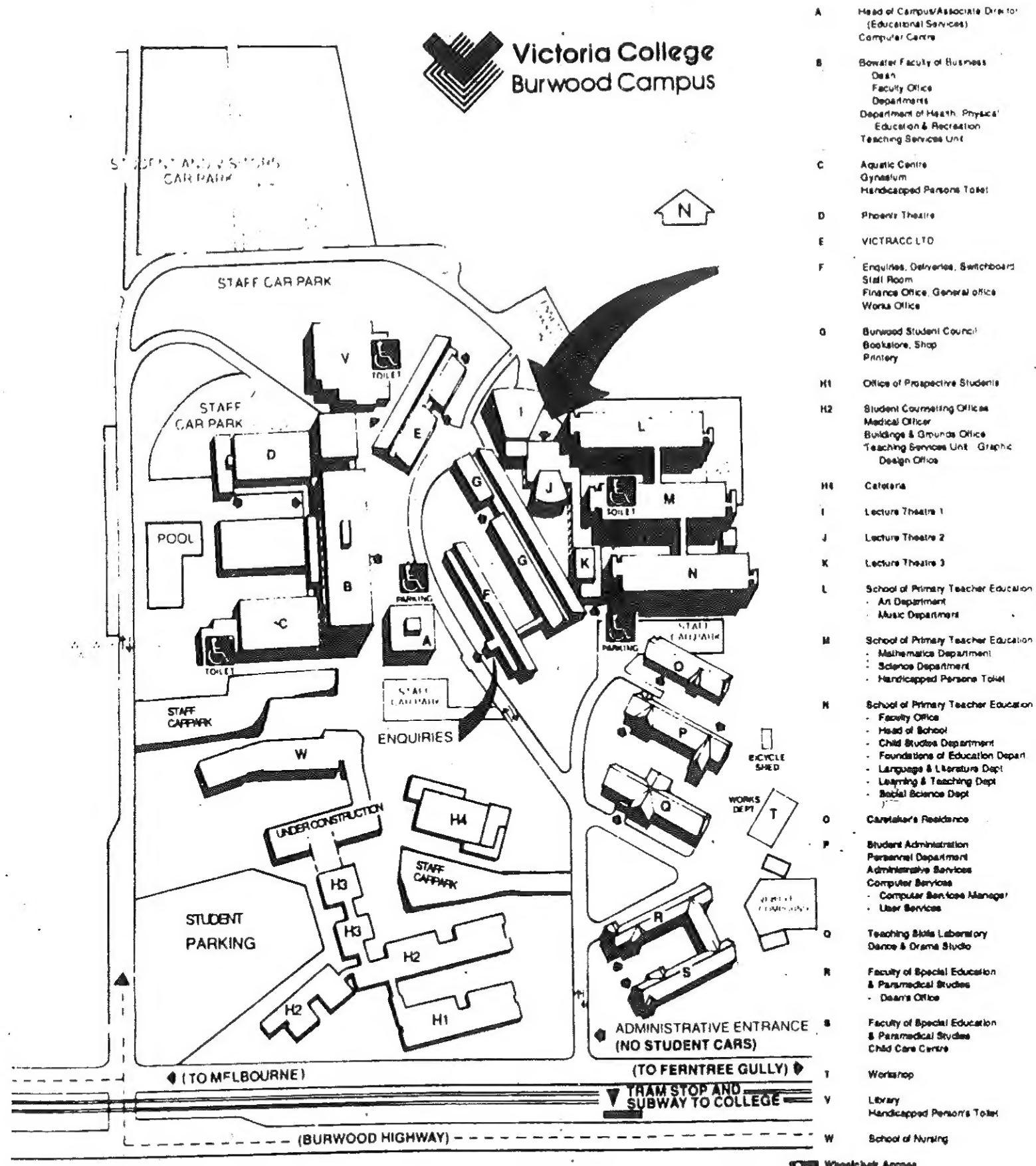
Signed: _____ Date: _____

If admitted as a member, I agree to abide by the rules of the Association for the time being in force.

Club Use Only	Date	Paid	Rcpt #	Memb #	Card Sent

November 1989 Amiga Workbench

AUG meets on the third Sunday of each month



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Computer Centre

B Bowater Faculty of Business
Dean
Faculty Office
Departments
Department of Health, Physical Education & Recreation
Teaching Services Unit

C Aquatic Centre
Gymnasium
Handicapped Persons Toilet

D Phoenix Theatre

E VICTRACC LTD

F Enquiries, Deliveries, Switchboard
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G Burwood Student Council
Bookstore, Shop
Printery

H1 Office of Prospective Students

H2 Student Counselling Offices
Medical Officer
Buildings & Grounds Office
Teaching Services Unit - Graphic Design Office

H4 Cafeteria

I Lecture Theatre 1

J Lecture Theatre 2

K Lecture Theatre 3

L School of Primary Teacher Education
- Art Department
- Music Department

M School of Primary Teacher Education
- Mathematics Department
- Science Department
- Handicapped Persons Toilet

N School of Primary Teacher Education
- Faculty Office
- Head of School
- Child Studies Department
- Foundations of Education Depart
- Language & Literature Dept
- Learning & Teaching Dept
- Social Science Dept

O Caretaker's Residence

P Student Administration
Personnel Department
Administrative Services
Computer Services
- Computer Services Manager
- User Services

Q Teaching Skills Laboratory
Dance & Drama Studio

R Faculty of Special Education & Paramedical Studies
- Dean's Office

S Faculty of Special Education & Paramedical Studies
Child Care Centre

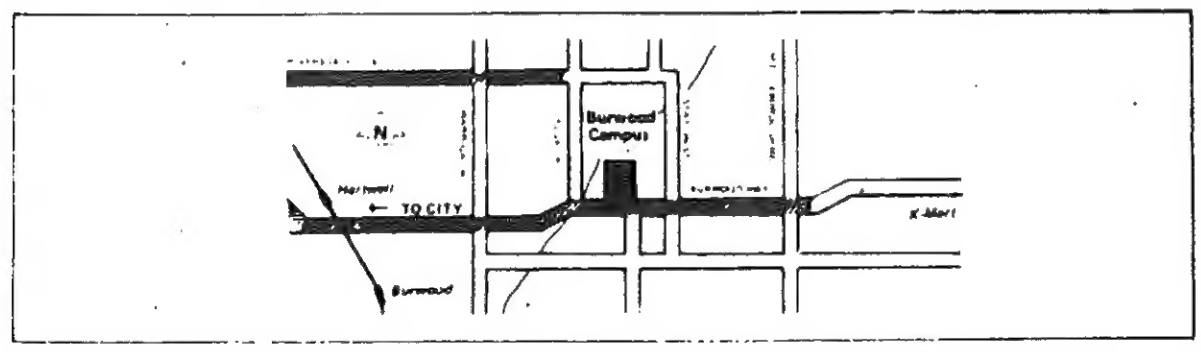
T Workshop

V Library
Handicapped Persons Toilet

W School of Nursing

Wheelchair Access
Buildings E,F,G,H2,I,J,K,M,N,V, and Aquatic Centre

Limited Access
Buildings B and C



Where is Victoria College, Burwood Campus?

Melways Map 61 reference B5.

People often have difficult locating our meeting place the first few times. Victoria College is on the North side of Burwood Highway, Burwood, just East of Elgar road. Coming from the City along Burwood Highway, turn left at the first set of traffic lights after Elgar road. Follow the road around past the football oval, over five traffic bumps to the car parking area near the netball courts. Further up the road, to the right, you'll find Lecture Theatre 2.

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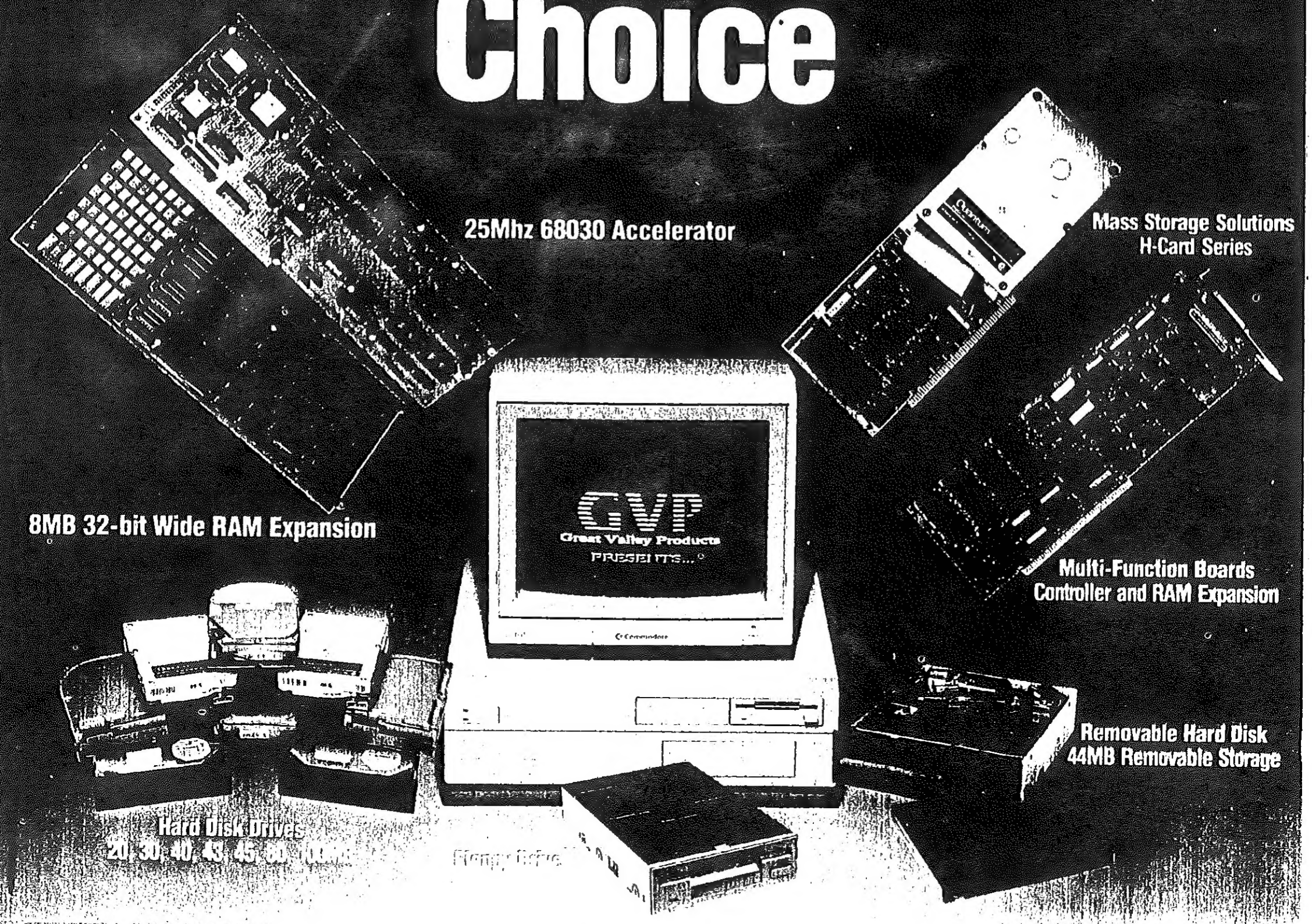

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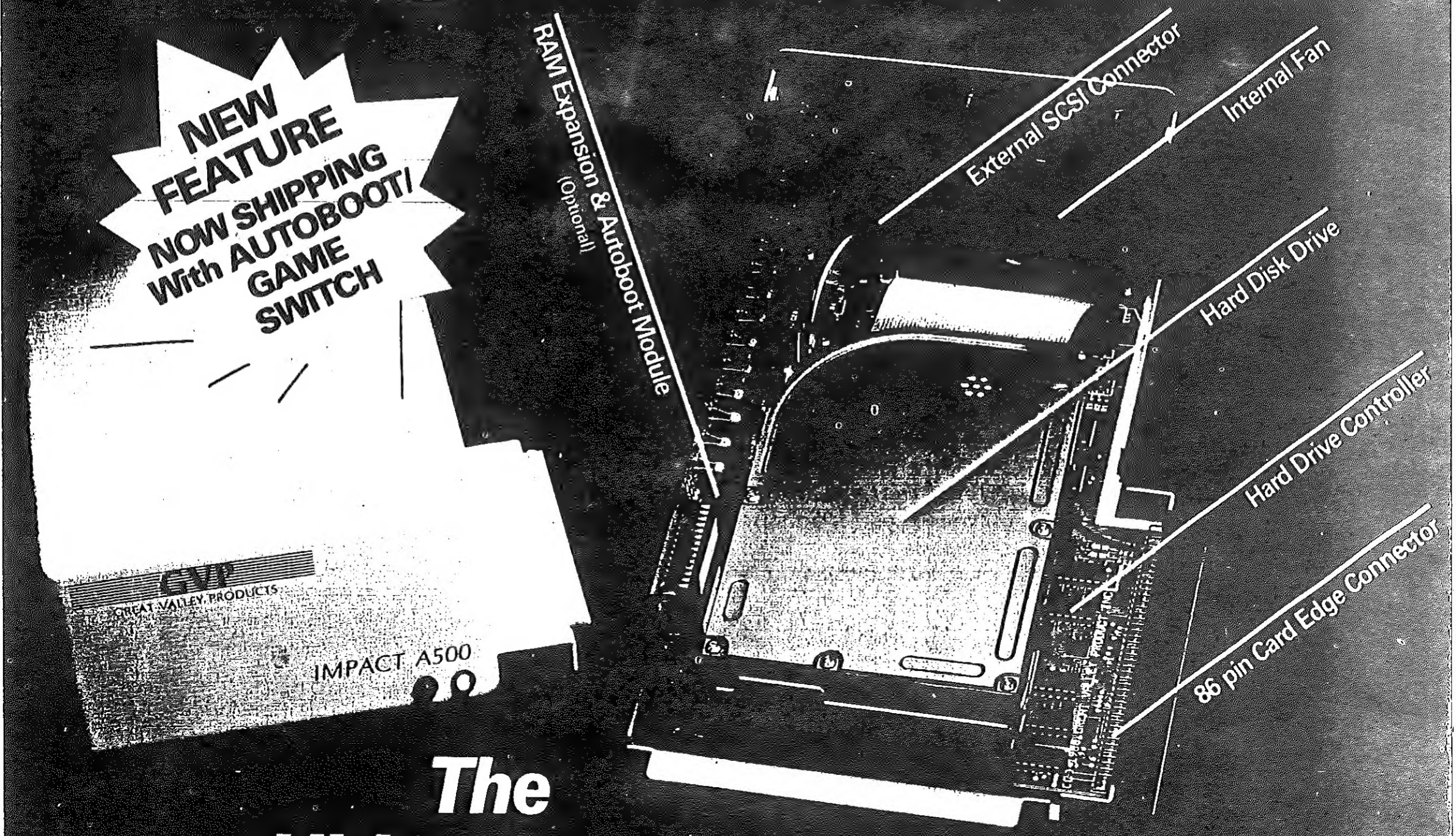

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